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AN INTRODUCTION To the only METHOD For Discovering LONGITUDE.

Humbly presented to both Houses of Parliament, and to those Worthy Persons that are to judge of it.

By *Stephen Plank*.

LONDON,
Printed in the Year 1714.

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THere is no Man that has any Knowledge, but what must own, That every Day the Sun at 12 a-Clock has gone thro' the 360 Degrees of Longitude, or round the Earth, (for Longitude is that Distance that measures from West to East, and so round the World, which is divided into 360 Parts, which we call *Degrees*) therefore we see plainly, that the Sun is That that measures Longitude, since every Day at Noon he has measur'd the 360 Degrees; whether the Sun goes round the Earth to measure it, or whether the Earth turns round to the Sun to be measured by it, argues not; for we see plainly, that the Sun is every Day at 12 a-Clock at Noon upon our Degree of Longitude; we see also that he appears after 12 at Noon to go to the West, and so measures the Earth round in the 24 Hours. Therefore if the Earth, or 360 Degrees is measured in 24 Hours, how long will one Degree be measuring? Certainly four Minutes. Then if I have Watches that will keep time with me, I may reason-

ably conclude, that if the Sun be four Minutes too fast for my Watches, I am got one Degree East, or if too slow, I am one Degree West from the Place where I first set out, and so accordingly, as 8 Minutes 2 Degrees, 12 Minutes 3 Degrees, &c. Then all that we have to seek, is to regulate Time, and then we have Longitude: For until that is found, Longitude will never be found. For supposing Perpetual Motion was found out, how could it be regular, if it was made of any Thing here upon Earth, for 'twould be subject to the Variation of the Air, and so by consequence would sometimes go faster than at other times, and so would not be regular, which is the main thing we want; besides, having 3 or 4 Watches, which show Seconds, you may easily see by the others, when you have wound up one, what Time you have lost, and set it forward again by the others, and so till you have wound them all up. For Longitude, this will answer as well as perpetual Motion, but it is Regular Motion that is wanted: Therefore all that we have to seek, is to preserve our Time in one continued Air, for we may reasonably think, that the Air is full of Atoms, which the All-wise Creator has made to compress and pull down

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all Earthly Bodies to its Center, if there were a Hole to let it go down; and as there is not, to ſtop upon the Surface of the Earth; theſe Atoms, tho' inviſible to us, we may believe by theſe Experiments: Take ſome Water in a Porringer (about a quarter full) then take a Glaſs Viol, and warm it by the Fire, when 'tis hot, put it in the Water, with the Mouth downwards, and you will ſee the Water aſcend up in the Bottle a conſiderable height: Or, take a Mug that will go into this Porringer, and put a Piece of lighted Paper in the bottom of the Mug, and turn the Mouth downwards in the Porringer, and you will ſee the Water aſcend in the Mug, which ſhews us, that the groſs Atoms being drove away, or deſtroy'd, the Air is ſo thin that it cannot keep the Water down, and ſo, by Conſequence, the Water aſcends upwards. The like you ſee by a Pump, for the Sucker drives the groſs Atoms up before it, while it leaves the Air under it ſo thin that the Water aſcends upwards, the thin Air not being capable of keeping the Water down. The like may be tried with a Pipe, put one end into Water, and the other into your Mouth, draw the Air out of the Pipe, and you'll ſoon have Water aſcend into your Mouth. Beſides, many

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Experiments of the Air that have been try'd by the Honourable *Robert Boyle*, Esq; and several other Learned Men.

Thus we see that the Works of God are so wonderful that no Man can comprehend them, for were there not such Atoms to keep and pull down these Earthly Bodies, how could we imagine our *Antipodes* to walk with their Feet against ours, and they not to fall into the Sky; therefore Reason alone, if we were to see no Experiments, would convince us, that there must be some of different Shapes and of different Sorts: Our Sence of Smelling gives us to distinguish many Sorts, and as for their Shapes, their different Operation in different Metals, gives us to understand.

Therefore to preserve these Watches in one sort of Air, I have purposed to keep them in a Brass Box over a Stove with a continual Fire in it, so well contriv'd that it may not jar so much when the Ship tosses to and fro.

The Secret to keep this Fire in proportion to the Weather or Countries, that the Watches may not be hoter in one Country than in another, I think not proper

per here to divulge, but am ready at any time, to make it appear: And I hope *England* will make greater Discoveries than other Nations, which will redound to their Profit, as well as Honour.

I should be very willing to go upon such Experiments, for by this Way of Sailing, Discovery would soon be made; for one need not to work a Traverse to know how far you have sail'd, but sail upon a strait Line, and if your Ourents should be strong with the Wind to drive you, then by your Time you may easily see which Way you have been drove, and if you cannot see the Sun, you may partly guess by the Colour of the Clouds when it rises, and having a Table of the Suns rising for every Degree of Latitude, and keeping as near an Observation as you can of your Latitude, always observing to be rather forward in your Reckoning, than otherwise, you may shun Dangers.

I have observed in the Map of the World, what a vast Compass of Water there is in one Place, without any Land discovered, which makes me think there must be some Country *there* undiscover'd:

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And I hope that the Lords and Commons in Parliament Assembled, will take it in Consideration to try the Experiment, the sooner the better, lest other Countries should make the Discovery before us, and then we should be prevented.

The Charge of the Experiment is inconsiderable, for it may be experimented here upon Land, so far as to satisfie the Possibility of making a true Discovery.

The Author hereof humbly hopes, That he has a nearer (and much cheaper) Way for Discovering Longitude, than hitherto has been propos'd, which he is ready to Communicate to those Honourable Persons that are appointed to judge of it.

FINIS.